

REMARKS

This amendment is submitted in an earnest effort to bring this application to issue without delay.

Applicants wish to thank Examiner Blumel and Examiner Campell for conducting a telephone interview with the Applicants' undersigned representative on 3 May 2007. The Examiners and the undersigned discussed the amendment that Applicants filed on 6 April 2007. The undersigned emphasized that the recombinant avian poxvirus with the vaccinia virus host range gene obtained in an increased viral titer has been grown in avian cells, and that the prior art, including FANG et al and TARTAGLIA et al make no mention of obtaining an avipoxvirus with an increased titer and do not specify that the avipoxvirus must be grown in avian cells.

The undersigned also pointed to the data in Example 2 of the application to establish proof that the present invention has been successfully applied and that Example 2 with the C7L vaccinia virus host range gene inserted into the canarypox vector and grown in CEF cells gave a viral titer one order of magnitude greater than did the corresponding canarypox vector without the C7L vaccinia virus host range gene.

The Examiners listened to Applicants' presentation and the principal problem that they saw to obtaining allowance of the claims as last presented is the disclosure in TARTAGLIA in col. 28 where mention is made of growing the ALVAC virus (an avipoxvirus).

in CEF cells (avian cells) with the E3L vaccinia virus host range gene inserted into the ALVAC virus. The Examiners accepted Applicants' argument that there is no disclosure or suggestion in TARTAGLIA that growing the avian poxvirus in avian cells and adding the vaccinia virus host range gene to the avian poxvirus would increase the viral titer of the avian poxvirus by an order of magnitude. However, the Examiners pointed out that nonetheless the reference still disclosed the same vaccinia host range gene, the same avipoxvirus and the same avian cells, and so they regarded claim 1 and all of the dependent claims as unpatentable over this disclosure in TARTAGLIA. The Examiners also pointed out that Applicants have no proof of the one order of magnitude increase in the avipoxvirus titer where any vaccinia virus host range gene is used other than C7L.

The undersigned pointed out that neither TARTAGLIA nor FANG et al nor any other reference known to Applicants shows any correlation between adding a vaccinia virus host range gene to the avipoxvirus grown in avian cells and an increase viral titer of the avian poxvirus. Furthermore Applicants know of no other classic vaccinia virus host range gene besides E3L that has been added to avian cells along with an avipoxvirus to obtain a recombinant avipoxvirus containing the vaccinia virus host range gene. Under these circumstances, Applicants should be entitled to claim the invention fairly broadly so long as the vaccinia virus host range gene E3L is not included in the claims.

The Examiners seemed to accept the argument that claims to such an invention would patentably distinguish over the cited prior art. The Examiners encouraged Applicants to submit such claims in a Supplemental Amendment. However, the Examiners indicated that they may do a supplemental prior art search to see if any of the other vaccinia virus host range genes besides E3L have been included in an avipoxvirus grown in avian cells before committing to allow the claims.

Consistent with what the Examiners indicated might be allowable over the cited prior art, Applicants have canceled all claims submitted in their amendment of 6 April 2007, and are submitting a new set of claims. The new claims, now submitted, no longer include the vaccinia virus host range gene E3L in the recombinant avipoxvirus. Note, however, that the newly submitted claims include method of preparation claims and method of use claims that had previously been withdrawn from further consideration by the Examiners. The undersigned asked the Examiners if they would reconsider such claims if Applicants amended the claims to delete the E3L vaccinia virus host range genes to wind up with claims that appeared to be allowable over the cited prior art. The Examiners did indicate that they would favorably reconsider reinstatement of the method of preparation and method of use claims and so Applicants have included these claims.

Applicants still wish to protect the recombinant avian poxvirus grown in avian cells and including the E3L vaccinia virus host range gene. The undersigned discussed with the Examiners how Applicants might obtain protection for this aspect of the invention notwithstanding the disclosure in TARTAGLIA and FANG et al. The Examiners were of the opinion that Applicants might be able to obtain process of preparation claims for such a recombinant poxvirus employing the E3L vaccinia virus host range gene, since there is no disclosure or suggestion in TARTAGLIA to obtain such a recombinant avipoxvirus with a high viral titer. However, Applicants would have to file a continuation or a divisional application to protect this aspect of the invention.

The Examiners indicated that so long as they do not find any additional prior art in a supplemental prior art search showing introduction of vaccinia virus host range genes into the avipoxvirus grown in avian cells, the Applicants have claims to patentable invention over the prior art.

Lastly the Examiners informed Applicants that the amendment filed on 6 April 2007 contained informalities in the amendment of the specification and/or the drawings. The Examiners indicated that the informalities related to the amendments to Figure 4 and Figure 7 and the reference thereto in the specification. The amended drawings must be labeled as REPLACEMENT DRAWINGS and the amendments to the specification require underlining the material added by amendment as well as striking out

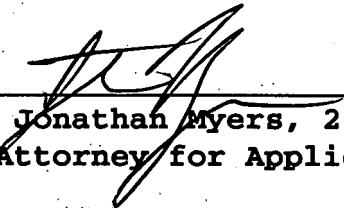
the deleted material. Examiner Blumel also pointed out specifically that Figure 4 contained both the polynucleotide that is the C7L vaccinia virus host range gene and the polypeptide using one letter amino acid codes expressed by the C7L gene. The Examiner suggested that when Applicants amend the Description of the Drawings on page 20 of the specification, Applicants make it clear that Figure 4 includes this amino acid sequence as well the polynucleotide sequence of SEQ ID NO:1, and that the amino acid sequence is the equivalent of the amino acid sequence designated SEQ ID NO:2 using the three letter amino acid codes.

Applicants have already filed a Supplemental Amendment on 16 May 2007 to correct the informalities pointed out in the amendment to the drawings and to the description of the drawings in the specification. The Supplemental Amendment of 16 May 2007 is believed to have corrected all of these informalities.

Applicants have canceled all claims previously presented and are now submitting new claims 32 through 60 which are consistent with the discussion between the Examiners and the undersigned during the interview. The claims now presented no longer include the vaccinia virus host range gene E3L, but in all other respects correspond to claims 1 through 9, 11 through 26 and 28 through 31. Antecedent basis for all claims now presented may be found in the specification on pp 3 through 19 and in Examples 1 and 2.

Applicants believe that all claims now presented are in condition for allowance and a response to that effect is earnestly solicited.

Respectfully submitted,
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